

Remarks

Applicants respectfully request reconsideration of this application as amended. Claim 15 has been amended. No claims have been cancelled. Therefore, claims 1-18 are presented for examination.

Claims 1-7, 11-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art (APA) in view of Chen (U.S. Patent No. 6,169,389). Applicants submit that the present claims are patentable over any combination of the APA and Chen.

Applicants' Specification discloses a power delivery system including a battery source coupled to a computer system. See Applicants' Figure 1 and Specification at paragraph 12. However, there is no disclosure of a current limiter coupled to the battery, a super capacitor (SC) or the computer system to prevent excess current from flowing from the battery to the SC.

Chen discloses a power source that provides power on power transmission lines 2, 3 to a remotely powered device 4. Due to resistance within the power transmission lines 2, 3, the line voltage V_L at the input T, R to the remotely powered device 4 is somewhat less than the voltage supplied by the power source V_s . The line voltage V_L at the input T, R of remotely powered device 4 is supplied to local energy storage device 6 so that energy can be stored therein during low load periods for use by remotely powered device 4 during peak load periods or during periods when the power transmission lines are not supplying sufficient power to meet the power needs of remotely powered device 4. See Chen at Figure 1. The local energy storage device 6 includes an input capacitor C9, a storage capacitor C10, and a bi-directional switching converter 16, which is also designated as the pump 16.

The input capacitor C9 serves as transient bypass for all internal circuits of remotely powered device 4. Whenever the input line voltage V_L is above a first threshold, bi-directional switching converter 16 will use any available current at input T, R to charge the storage capacitor C10 up to the maximum storage level. During the charging process, the

input voltage VL is kept at the first threshold, and all available current is used to charge storage capacitor C10. After storage capacitor C10 is fully charged to the maximum storage level, the input voltage VL will then rise to a level determined by the steady load conditions. This pumping and supercharging of the storage capacitor C10 leads to increased efficiency and the capability of using a smaller capacitor (Figure 2 and col. 3, ll. 55 – col. 4, ll. 16).

However, Chen does not disclose or suggest a current limiter to prevent excess current from flowing from a battery to a SC. ✓

Claim 1 recites a current limiter coupled to a battery, a SC and a computer system to prevent excess current from flowing from the battery to the SC. As discussed above neither the APA nor Chen disclose or suggest such a limitation. Since neither the APA nor Chen disclose or suggest a current limiter coupled to a battery, a SC and a computer system to prevent excess current from flowing from the battery to the SC, any combination of the APA and Chen would also not disclose or suggest such a limitation. Therefore, claim 1 is patentable over the APA in view of Chen.

Claims 2-10 depend from claim 1 and include additional limitations. Therefore, claims 2-10 are also patentable over the APA in view of Chen. ✓

Claim 11 recites a current limiter coupled to a battery, a SC and a power delivery system to prevent excess current from flowing from the battery to the SC. For the reasons discussed above with respect to claim 1, claim 11 is also patentable over the APA in view of Chen. Because claims 12-14 depend from claim 11 and include additional limitations, claims 12-14 are also patentable over the APA in view of Chen. ✓

Claim 15 recites a second transistor to prevent excess current from flowing from a battery to a SC. For the reasons discussed above with respect to claim 1, claim 15 is also patentable over the APA in view of Chen. Since claims 16-18 depend from claim 15 and include additional limitations, claims 16-18 are also patentable over the APA in view of Chen.

Claims 8-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Chen et al., and further in view of Smith et al., U.S. Patent No. 4,868,826 ("Smith"). In addition, claims 16-18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of Smith. Applicants submit that the present claims are patentable over any combination of the APA, Chen and Smith.

Smith discloses circuit modules for providing digital or analog outputs from computational devices in such a manner that the components of the output circuit modules are tolerant of malfunctions in one or more of the components. See Smith at Abstract. Nonetheless, Smith does not disclose or suggest a current limiter coupled to a battery, a SC and a computer system to prevent excess current from flowing from the battery to the SC. As described above, neither the APA nor Chen disclose or suggest such a limitation. Therefore, any combination of the APA, Chen and/or Smith would also not disclose or suggest a current limiter coupled to a battery, a SC and a computer system to prevent excess current from flowing from the battery to the SC. Therefore, the present claims are patentable over the APA and Chen in view of Smith, and the APA in view of Smith.

It should furthermore be noted that the above amendments to the claims have not been made within view to overcoming any prior art of which the applicants are aware, or that has been cited in the present Office Action. The above amendments have been made with a view to modifying the form of the claims.

Applicants respectfully submit that the rejections have been overcome, and that the claims are now in condition for allowance. Accordingly, applicants respectfully request the rejections be withdrawn and the be allowed.


The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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